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15 Principal, California Water Research

16 **BEFORE THE**  
17 **CALIFORNIA STATE WATER RESOURCES CONTROL BOARD**

18 HEARING IN THE MATTER OF  
19 CALIFORNIA DEPARTMENT OF  
20 WATER RESOURCES AND UNITED  
21 STATES BUREAU OF RECLAMATION  
22 REQUEST FOR A CHANGE IN POINT OF  
23 DIVERSION FOR CALIFORNIA WATER  
24 FIX

25 REBUTTAL TESTIMONY OF  
26 DAVID S. FRIES, PHD

1 I David Fries, do hereby declare:

2 My name is David Fries, and I have previously testified in this hearing. My Statement of  
3 Qualifications has previously been submitted as Exhibit DDJ-214.

4  
5 **SUMMARY OF TESTIMONY**

6 This testimony rebuts testimony by Christopher Earle, Douglas Rischbieter, and John Bednarski,  
7 including the following:

- 8 1. Statements on Adaptive Management.
- 9 2. Written and oral testimonies of Dr. Earle, regarding the stated lack of significant  
10 impacts on all avian species. Rebuttal is focused on three bird species: California  
11 Black Rails, Swainson’s Hawks, and Tri-colored Blackbirds.
- 12 3. Mr. Rischbieter’s statements that CWF will not result in any unreasonable impacts on  
13 Recreation.
- 14 4. Mr. Bernardski’s statements that CWF will not have significant impacts on  
15 transportation and navigation in the Delta.
- 16 5. Proposed permit terms related to the above testimonies.

17  
18 **I. ADAPTIVE MANAGEMENT**

19 In his oral testimony (R.T. March 5, 28:15-21) Earle states:

20 “The Adaptive Management Program is a four-phase process. The first phase is as  
21 shown here, labeled “Planning.” And this consists of setting initial priorities through the  
22 operations plan and the science plan. This phase, for instance, has already been done  
effectively in the Biological Opinions and the Incidental Take Permit.”

23 This statement is inconsistent with the definition of adaptive management in the Delta Reform  
24 Act. The Delta Reform Act defines adaptive management as follows:

25 “Adaptive management” means a framework and flexible decisionmaking process for  
26 ongoing knowledge acquisition, monitoring, and evaluation leading to continuous  
27 improvement in management planning and implementation of a project to achieve  
28 specified objectives.

1 Adaptive management does not mean that the project implementation is not defined, but that it is  
2 subject to continuous improvement. Every part of CWF is still in a planning stage, as is stated  
3 repeatedly in the CWF petition and has been stated in the testimonies of many CWF proponents.  
4 The CWF project is still evolving and it is unpredictable where its evolution or failure will end.  
5 There have been no surveys done in the proposed project footprint for endangered or protected  
6 species, and there are few to no specified biological objectives for affected species. There is no  
7 defined plan for mitigation of damage to biological species that already has been identified, only  
8 statements that it will be planned to occur.

9 Metropolitan Water District's WaterFix project engineer, John Bednarski, testified on  
10 cross-examination that the Waterfix facilities configuration will be re-evaluated by the  
11 Engineering Design Manager (WaterFix Hearing Transcript, March 9, 2018, p. 13 at 13.) There  
12 is no final plan for the tunnel route. There is no final siting of shaft locations or work areas.  
13 There is no final siting for the barge landings. There is no plan for barge management. There is  
14 no plan for how tunnel muck will be treated, nor where it will be stored, nor how it will get  
15 transported to final storage sites. There is no final operations plan as it is still being developed.

16 Dr. Earle's testimony is just another misleading statement to give the impression that the  
17 California WaterFix project is on top of things. No Adaptive Management phase 1, "Planning,"  
18 can be "already done effectively" while there is no final project plan submitted by the  
19 applicants. If Dr. Earle believes his testimony is correct, it just goes to show that he, nor the  
20 WaterFix consultants, nor the Department of Water Resources, understand or are committed to  
21 successful Adaptive Management.

## 22

## 23 **II. IMPACTS ON AVIAN SPECIES**

24 Dr. Earle's testimony states as follows:

25  
26 "The 2017 Certified FEIR, composed in part of the 2016 FEIR/S, examines impacts to  
27 numerous species that collectively comprise all wildlife potentially present in the project  
28 vicinity; those impacts are summarized in the impact determinations for biological  
resources of the 2016 FEIR/S Table ES-8. (Exhibit SWRCB-102, pp. ES-93 to ES-117.)

1 None of the FEIR/S impacts to species are significant and unavoidable; all are less than  
2 significant, or less than significant with mitigation.”

3 (Exhibit DWR-1014, p3:9)

4 Dr. Earle’s statement was confirmed in cross exam (Transcript; March 9, p25, lines 19.)

5 The Administrative Draft Supplemental EIR states that it changes only acreages impacted for  
6 different species, but does not change the CEQA conclusion cited in Dr. Earle’s testimony of  
7 “less than significant” or “significant with mitigation.”

8 Dr. Earle’s statement is made without proper surveys for any bird species and without  
9 consulting the best available scientific resources. In addition, mitigation for the impacts that are  
10 acknowledged is not realistic or sufficient. It appears that maps used to identify construction  
11 areas that would be affected for different species are inadequate or that critical areas have been  
12 left out. Following, I give rebuttal for three species, (California Black Rails, Swainson’s Hawks  
13 and Tricolored Blackbirds); however, the rebuttal could be extended to White-tailed Kites,  
14 Modesto Song Birds, Greater and Lesser Sandhill Cranes, as well as other avian and terrestrial  
15 species.

#### 16 **A. California Black Rails**

17 The impact on California black rails was NOT “less than significant,” and would NOT be “less  
18 than significant” with the changes. As shown on cross-examination of Earle, California  
19 Department of Water Resources (“DWR”) and the CWF consultants have failed to use their own  
20 survey (Exhibit DDJ-246, Tsao, et al. San Francisco Estuary and Watershed Science, December  
21 2015) and the best available science to identify where black rails have been sited and to identify  
22 potential habitat for the rails in or near the construction zones. Black rails have been reported in  
23 both Stone Lakes NWR and the Cosumnes River Preserve, which are not indicated on Figure  
24 12-18 of Exhibit SWRCB-113. It is difficult to read Figure 12-18 as it is of especially small  
25 scale; however, it is arduous to agree that only 6 acres of black rail habitat will be affected by  
26 CFW. I question that the habitat areas listed below, have been included in the acreage included  
27 in Table 12-18, *Impacts on California Black Rail Modeled Habitat*, Exhibit SWRCB-113, p12-  
28 23.

- 1           1. **Black rails are found in Stone Lakes NWR.** The construction zone for the IF,  
2           the three intakes and tunnel connections border the Reserve and the rail habitat  
3           there is not indicated. Rail habitat in Stone Lakes NWR could be easily affected  
4           by CWF construction and perhaps operation. See (Exhibit SWRCB-113, Maps  
5           M4, Sheets 1 and 2.)
- 6           2. **The four inchannel islands located near the barge landing dock on Bouldin**  
7           **Island are all primary black rail habitat.** These islands are not shown well  
8           (maybe purposely) on Exhibit SWRCB-113, Maps M-4, Sheet 3, but are clearly  
9           visible on Google Maps or Navigational Charts.
- 10          3. Continuing southward on the tunnel route to the barge landing site indicated on the  
11          south side of Venice Island (still on Maps M-4, Sheet 3, but hardly marked), just  
12          to the southeast of the barge landing lies **Mandeville Tip County Park**. The Park  
13          is designated black rail habitat and the rail has been observed there.
- 14          4. Going just a little further south on Map M-4, Sheet 3, there is a barge landing site  
15          indicated on the west side of Mandeville Island. Again, there is **a large wetlands**  
16          **just to the west of the barge site** (again hardly indicated) which is black rail  
17          habitat and where the rail has been observed.
- 18          5. **Wetlands on Mandeville Island have been identified as black rail habitat.**  
19          Extensive CWF construction is proposed on Mandeville and it is not clear if these  
20          wetlands are included in the six acres to be impacted and listed in table 12-18.
- 21          6. There is a barge landing indicated for the north side of Bacon Island (just between  
22          Bacon and Mandeville). In that narrow channel, between Bacon and Mandeville  
23          Ils., **there is a good sized island where black rails are known to habitat.**
- 24          7. In addition, there is the ITP requirement for mitigation for Delta smelt which has a  
25          direct relationship to black rail mitigation. The Developments After FEIR  
26          document (Exhibit SWRCB-108, p 108, bottom) states.  
27                  “With regard to California black rail, the portions of the increase in Delta  
28                  smelt habitat occurring in managed wetland natural community (up to  
                1,022 acres) could be sited in areas used as foraging or nesting habitat by

1 the rail; moreover, the Tidal Natural Communities Restoration proposed for  
2 the Delta smelt would serve as nesting and foraging habitat for the rail.”

3 **Habitat for Delta Smelt and California Black Rail are not the same and**  
4 **would not be acceptable habitat restoration for the Rails.**

5 Based on the above observations, I believe that it is clear that CWF has not factually  
6 listed potential impacts to black rail habitat. In addition to the vast under estimate of California  
7 Black Rail habitat that will be impacted by CWF, neither Dr. Earle’s testimony, nor the EIR, nor  
8 the Draft Supplement, discuss the difficulty in mitigating for that habitat. Black rail habitat  
9 creation has essentially never been done (see DDJ 246 and references therein.) If it is attempted  
10 by CWF, it cannot be on a 1:1 ratio of impacted to restored acreage. Any attempts to create  
11 Black Rail habitat are highly prone to failure and, if ever successful, it will take years for the  
12 highly dense wetland community, suitable for black rail breeding and foraging, to mature.

13 Moreover, relative to the impacts on California Black Rails, there is the issue of the rails  
14 flying into power lines. The Admin Draft Supplemental EIR states:

15 **“Impact BIO-58: Effects on California Black Rail Associated with Electrical**  
16 **Transmission Facilities**

17 The risk of California black rail’s colliding with transmission lines was determined to be  
18 minimal under the approved project. The proposed project reduces the risk of electrical  
19 transmission line collisions relative to the approved project because the approved project  
20 transmission alignment would cross over wetland habitat on two small islands in the  
21 central Delta between Mandeville and Bouldin Islands, which the proposed project would  
22 avoid. As described in *AMM20 Greater Sandhill Crane*, all new project transmission  
23 lines would be fitted with flight diverters, which would greatly reduce the risk of  
24 California black rails colliding with project powerlines. There would be no take of  
25 California black rail from the project as defined under Section 86 of the California Fish  
26 and Game Code.”

27 It is not clear how alignment of transmission lines to “cross over wetland habitat on two small  
28 islands” would decrease potential for bird collisions, especially black rails who live there. As  
29 far as diverters go, the flight characteristics of black rails, in migration, is not highly studied.  
30 These are small birds, there aren’t many of them, and there aren’t many power lines in the Delta.  
31 If one hit a power line, it would be nearly impossible to detect; but strikes are possible. Any  
32 increase in power lines has to increase the chance of strikes. It is probable that the rail flies at  
33 night, so diverters would be no help.

1 John Bednarski also testified that he did not expect any significant impacts on the surface due to  
2 tunnel boring. (R.T. March 9, 2018, 32:3-33:3.) Dr. Clyde Thomas Williams testified in Part 1  
3 that tunnel boring in soft soils, such as in the Delta, can and do cause significant ground  
4 movements. (Exhibit DDJ-163, p. 11:1-15:21.) The Final EIR/EIS also states that up to 2.9  
5 inches of settlement is expected on the surface. (Exhibit SWRCB-102, p. 9-288.) It is possible  
6 the ground movements, generated by the tunneling machines, will disturb nesting animals on the  
7 surface above the operation of the boring machines. California Black Rails build their nest just  
8 inches above the water line. Any subsidence of land could result in flooding of those nests.  
9 Driving nesting endangered species from nesting sites and possibly causing abandonment of the  
10 nest is a form of “take” of the animals. The Final EIR/EIS does not provide for any assessment  
11 of settlement impacts on critical habitat for endangered terrestrial species.

12 I conclude that the CWF project would have significant and unavoidable impacts on  
13 California black rails and that the assessment to the contrary, as testified by Dr. Earle and stated  
14 in the Draft Supplemental EIR (Exhibit SWRCB-113), is incorrect.

#### 15 **B. SWAINSON’S HAWKS**

16 The impact on Swainson’s Hawks was NOT “less than significant,” and would NOT be “less  
17 than significant” with the changes described in the Draft Supplemental EIR (Exhibit SWRCB-  
18 113). The California Department of Water Resources and the CWF consultants have failed to  
19 use best available science in evaluating where these hawks exist and where they nest and forage.  
20 The mitigation described for these birds is unrealistic and would be ineffective.  
21

22 Looking at the map, Figure 12-27 (Exhibit SWRCB-113, Maps, figure 12-27) titled  
23 “Swainson’s Hawk Distribution and Habitat in Study Area Vicinity”, it is difficult to see how  
24 the conclusion that impact on Swainson’s Hawks can be validated as less than significant, even  
25 with mitigation. We see on the map hundreds of purple dots, designating Swainson’s Hawk  
26 presence. We see on the map a few (maybe ten or at most twenty) green dots designating  
27 Swainson’s Hawk nesting sites. This map shows that the CWF project has no idea of where the  
28 Swainson’s Hawks are nesting. A thorough survey must be done before construction sites are

1 designated in the area. I, along with colleague Dale Smith, past president of the San Joaquin  
2 Audubon Society, recently made a survey of the riparian strip along Snodgrass Slough, which is  
3 owned by Stone Lakes NWR and is immediately adjacent (west) to the tunnel route connection  
4 form the intakes to the Intermediate Forebay. We observed 13 Swainson's Hawks and 9 hawk  
5 nest sites (not all identifiable as occupied by Swainson's) along the approximately 2 mi strip.  
6 CWF construction in this area will surely impact these birds.

7 Dr. Earle testifies that mitigation and AMM's will lessen the impact on Swainson's Hawks  
8 to less than significant. There are three mitigation or AMM's listed for Swainson's Hawks that I  
9 call into question as being effective.

- 10 1. Tree planting to compensate for 7 nest sites that would be impacted (see Exhibit  
11 SWRCB-107, ITP p 213 and p 214) is of questionable immediate effectiveness. First  
12 of all, the number of nest sites that will be affected is unknown as the Maps figure 12-  
13 27 reveal. Planting trees of 20 ft height or less will take years to mature perhaps to  
14 evolve into habitat acceptable to a pair of Swainson's Hawks. **This action will not**  
15 **minimize the short-term effects on Swainson's Hawks as CWF claims.**
- 16 2. **The AMM described in Table 4-1 (Exhibit SWRCB-111, p 4-28-29, lines 38-39) is**  
17 **not realistic, in terms of being achievable.** The tunnel route is approximately 36-38  
18 mi long. Along that route, there are hundreds of trees that are active or potential  
19 Swainson's Hawk nesting sites. I question that it is possible to identify all of the  
20 possible nesting sites and have an expert biologist on site during the restricted time  
21 periods indicated. Where will CWF find one-hundred or more trained biologist, all at  
22 one time, who can tell the difference between one species of hawk vs. the  
23 Swainson's? This strategy might work well for a small construction project, but is  
24 highly questionable for achievement on such a massive project as CWF.
- 25 3. In the AMMs, (Exhibit SWRCB-111, p 4-31, lines 8-11) it states:  
26 "Swainson's hawk foraging habitat will be protected within 3 miles of a known  
27 Swainson's hawk tree and within 50 miles of the project on land not subject to  
28 threat of seasonal flooding, construction disturbances, or other conditions that  
would reduce the foraging value of the land."

1           **It is inconceivable to me how this AMM can be honored.** Besides, research has  
2 shown that Swainson's Hawks cannot successfully support a nest site if they have to  
3 forage greater than 20 miles from the nest site.

4  
5           Based on the above listed arguments, Dr. Earle's statement that impacts on Swainson's  
6 Hawks are "less than significant", is not supported by the actual proposed mitigations. Nor  
7 would the impacts be "less than significant" with the changes in the Admin Supplemental Draft  
8 of the CWF EIR. Rather, acknowledging the large number of Swainson's Hawks in the CWF  
9 construction zones, and the lack of quantification of the existing and potential nest sites, and the  
10 fact that the hawk is a protected no take species, the potential for significant impact, with or  
11 without mitigation, is highly probable.

### 12 13           **C. Tri-colored Blackbird (TCB)**

14           The impact on Tri-colored Blackbirds was NOT "less than significant", and would NOT be  
15 "less than significant" with the changes. In Table 10-1 (Exhibit SWRCB-111, ITP, p 209) it is  
16 listed that 2,063 acres of breeding habitat, 1,774 acres of nonbreeding foraging habitat, 16 acres  
17 of nesting habitat, and 20 acres of roosting habitat for TCBs will be impacted by CWF. TCBs  
18 are a state listed endangered and no take species.

19           The following statements are made in the Final EIR document Exhibit SWRCB-108,  
20 p109-110, relative to Tricolored Blackbirds.

21           With regard to tricolored blackbird, the area of increased Delta smelt habitat (1,533  
22 acres) could be sited in areas used as foraging or nesting habitat by the blackbird. (The  
23 grassland and riparian areas could serve as foraging or nesting habitat, and the managed  
wetland areas could serve as foraging habitat.)

24           As detailed in Chapter 3, Section 3.3.2.2, such impacts would be assessed in detail in the  
25 final CESA documentation prepared for the proposed habitat site(s). Should such  
26 refinements entail unexpected impacts, it is possible that supplemental review documents  
27 may be necessary under CEQA or NEPA. Any such need is very unlikely, however.  
28 Under CESA, impacts to tricolored blackbird must be fully mitigated in order to avoid  
any incidental take of this species, in accordance with the requirements of CESA  
pertaining to issuance of an ITP under FGC Section 2081(b). That mitigation will likely  
be provided under the same terms of tricolored blackbird mitigation as set forth **in the**  
**proposed ITP** for the California WaterFix, which details measures to minimize  
incidental take of the blackbird, **mitigates loss of foraging habitat by protection in**  
**perpetuity of an equal area of foraging habitat, mitigates loss of roosting habitat by**

1 protection in perpetuity of twice the acreage of roosting habitat, and mitigates loss  
2 of breeding habitat by protection in perpetuity of thrice the acreage of breeding  
3 habitat. In consideration of these factors, the description of less-than-significant  
4 impacts to this species under Alternative 4A, presented in Chapter 12, remains accurate.”  
(underlining added)

5 The preferred nesting habitat for Tricolored Blackbirds is wetlands, not grasslands and riparian  
6 areas, as stated by CWF. According to the statement here, regarding mitigation for tricolored  
7 blackbirds, 2000 acres (twice) of roosting habitat and 3000 acres (thrice) of breeding habitat  
8 should be added to the mitigation for Tricolored Blackbirds. **The CWF proposed project has**  
9 **made no commitment to meet these requirements.**

10 In light of these facts, Dr. Earle’s statement that ‘less-than-significant impacts’ on Tri-  
11 colored Blackbirds would occur due to WaterFix construction is a false statement.

#### 12 **D. ALL SPECIES**

13 Dr. Earle states that impacts on all of the above species can be rendered less-than-significant  
14 with mitigation. The statement is false because he has not presented evidence, or a plan, in his  
15 testimony on how the mitigation would occur. Dr. Earle and the Draft Supplemental EIR  
16 (Exhibit SWRCB-113) lack a discussion of the difficulty in obtaining land suitable for the  
17 mitigation’s purpose. One cannot assume that land is available or that land owners will be  
18 willing to sell. This point is well illustrated in Exhibit SWRCB-108 p 104, last paragraph. This  
19 statement is in relation to mitigation for transportation. Dr. Earle and CWF do not apply the  
20 same fact to mitigation habitat for biological species.

21 “The assessment of impacts on transportation included in the Final EIR/EIS identified  
22 significant/adverse impacts on the capacity of specified roadway segments (Impact  
23 TRANS-1), damage to roadways (Impact TRANS-2), and roadway safety (Impact  
24 TRANS-3). Impact TRANS-1 was described as significant and unavoidable, as the  
25 mitigation necessary to render the impact less than significant requires agreements that  
26 cannot go forward absent the cooperation of third parties, which cannot be assured.”  
(underline added)

27 Other important factors that make impacts and mitigations “less than significant” include  
28 the difficulty in timing. Impacts will occur rapidly and at the beginning of CWF construction.  
Mitigation, in terms of replacement of acceptable habitat, for the species being impacted, will

1 take decades in many cases. This fact is surely true for replacement of riparian and wetland  
2 habitats.

3 An additional complicating factor is difficulty of acquiring land, say for the development of  
4 wetlands, that does not affect habitat for some other species, say grasslands. There is kind of a  
5 domino effect in the mitigation process that is not discussed or addressed in the CWF EIR. This  
6 point is well illustrated in the example above where the ITP obligates CWF to develop more  
7 than 1500 acres of habitat for Delta Smelt, which results in vast losses for habitat for black rails  
8 and tri-colored blackbirds. Dr. Earle's stated in written and oral testimony, that "None of the  
9 FEIR/S impacts to species are significant and unavoidable; all are less than significant, or less  
10 than significant with mitigation." In rebuttal, I submit that impacts will be substantial for many  
11 avian species and that mitigation for the impacts will be highly difficult and expensive, if not  
12 impossible to fulfill.

## 14 **II. IMPACTS ON RECREATIONAL BIRDING AND BOATING FESTIVALS AND** 15 **TRAVEL**

16 Rischbieter states at the opening of his testimony:

17 "My testimony demonstrates that construction and operation CWF associated with the  
18 change in point of diversion for CWF will reasonably protect recreation."

19 (Exhibit DWR-1024, page 2, lines 1 and 2).

20 In conclusion, Rischbieter states (Exhibit DWR-1024, page 7, lines 18-21):

21 "Based on the facility descriptions, construction methods, modeling results, and  
22 mitigation measures for CWF H3+, I believe that CWF H3+ construction and operation  
will not result in any unreasonable impact to the loss of recreational beneficial uses of  
Delta and upstream waters."

23 In rebuttal, I submit that these statements are contradicted by Mr. Rischbieter's own  
24 testimony. Rischbieter testified that the recreation beneficial uses in the Delta (REC-1 and  
25 REC-2) would be protected by the WaterFix Project meeting the criteria in the 2006 Bay-Delta  
26 Water Quality Control Plan (Exhibit DWR-1024, 5:6-13.) Table 1 in the 2006 Bay-Delta Water  
27 Quality Control Plan (Exhibit SWRCB-27, p. 23) allegedly protects recreational uses in the  
28 Delta. But it is simply the salinity standards at Rock Slough, Clifton Court Forebay, the Tracy

1 pumping plant, and other Municipal and Industrial intakes in the Delta. On cross-examination,  
2 Rischbieter could not name a single study that tied salinity in the Delta to suitability for  
3 swimming or boating. (R.T. March 9, 2018, 135:25-137:8.) Nor has the CWF final EIR/EIS,  
4 BO's, BA's, ITP, or the Draft Supplemental EIR determined recreational activities and locations  
5 in the Delta and analyzed effects of CWF H3+ on recreational activities and locations.

6 Mr. Rischbieter's testimony contradicts his own conclusion that CWF construction and  
7 operation will not result in any unreasonable impact to loss of recreational beneficial uses in the  
8 Delta. Consider the following statements from Mr. Rischbieter's testimony, Exhibit DWR-  
9 1024.

10 Page 5, line 27-28 and top of page 6. "The 2016 Final EIR/EIS identifies that there is  
11 significant and unavoidable effect on recreation resources at 8 delta recreation sites due  
12 to CWF construction. (Exhibit SWRCB-102, Final EIR/EIS 15-15.) These effects  
include noise and visual disturbances, plus surface impact in 2 of the 8 locations...."

13 Page 6, lines 8-10. "However, due to the dispersed effects on the recreation experience  
14 across the Delta, it is not certain that mitigation would reduce the level of these impacts  
to less than significant in all instances."

15 Page 7, lines 6-7. "Thus, this temporary construction impact to recreational boating  
impact would be significant and unavoidable during construction."

16 Mr. Rischbieter's own testimony clearly negates his conclusion that CWF impacts on recreation  
17 will not cause "unreasonable impact to loss of recreational beneficial uses in the Delta."

18 Annual recreational events, such as The Central Valley Birding Symposium  
19 (<http://www.cvbirds.org/events/symposium/info/>), The Lodi Sandhill Crane Festival  
20 (<http://cranefestival.com/tours.php>), The Galt Winter Birding Festival  
21 (<http://www.ci.galt.ca.us/city-departments/parks-recreation/winter-bird-festival>), The Delta  
22 Ditch Run sailing regatta, and the Latitude 38 Delta Doo Dah (<http://www.deltadoodah.com>),  
23 will be seriously impacted for the duration of the CWF construction activities. The impacts on  
24 these events, and recreational activities associated with them, must be considered in making  
25 conclusions that impacts of recreation are not significant. The Final EIR/EIS fails to consider  
26 these events.

27 The Draft Supplemental EIR does not describe the increased truck traffic (and possibly  
28 barge traffic) that will be necessitated by removal of two barge landings and the decision not to

1 place tunnel muck on Staten Island. Trucking of tunnel lining segments from barge landings to  
2 tunnel shafts will have to increase dramatically. Transporting tunnel muck from one island to  
3 storage on a different island (say Staten to Bouldin) will require significant increases in truck  
4 traffic on narrow Delta highways. Noise and dust will be increased. The aesthetics of the Delta  
5 will be disrupted. The traffic congestion alone will make access to the Delta a place to avoid.  
6 The possibility that it may be necessary to truck in engineered fill for the intakes and shaft pads  
7 is also not analyzed in the traffic analysis.

8 It should be emphasized that a construction project of 13 years should not be called  
9 temporary. Access to many recreational sites (Staten Island, Stone Lakes NWR, Potato Slough  
10 Anchorage areas, and the whole Delta to some extent) will be impacted heavily for the duration  
11 of the construction project. Permanent environmental damage will be done at many of the  
12 construction sites. Such violations and impacts are in direct conflict to the California Public  
13 Trust Doctrine and must not be allowed.

### 14 III. IMPACTS TO NAVIGATION AND BOATING

15 Mr. Bednarski describes the CWF construction activities with potential to impact  
16 navigation (Exhibit DWR-1022.) Mr. Bednarski states that impacts to navigation may result  
17 from narrowing of river channels by barge unloading facilities and increased barge traffic. He  
18 does not describe the potential for severe impacts on navigation by CWF construction.

19 In rebuttal, I submit that impacts on navigation by the barge landings and the barge traffic  
20 is understated and will actually result in significant and unavoidable danger to navigation in the  
21 Delta.

- 22 1. **Four of the five barge landings proposed are located within narrow channels in the**  
23 **Delta.** Mr. Bednarski states that barge landing size will be approximately 50 ft width by  
24 300 ft length. Mr. Bednarski's statement does not agree with other information in the  
25 CWF petition. For instance, the ITP (SWRCB-107, p5, line 6) for the barge landing on  
26 Bouldin Island describes a width of 0.07 miles into the river. ( $5280 \text{ ft/mi} \times 0.07 \text{ mi} = 369$   
27 ft. Similar discrepancies exist for all of the barge landing descriptions in the ITP and the  
28 ACE 404 permit application. However, barge landings that extend only 50 ft into the

1 water channels with a 50 ft wide barge tied to it, will be a hindrance to navigation in  
2 these narrow waterways. In engineering design, Mr. Bednarski (or whomever designed  
3 the barge landings) has only looked at waterway width at the landing sites and not at  
4 adequate water depth.

5 The Supplemental Draft EIR states:

6 “The construction, operation, and removal of the temporary barge unloading sites  
7 under the proposed project would be the same as described in Final EIR/EIS  
8 Chapter 3, *Description of Alternatives*. Generally, the barge unloading facilities  
9 would be designed to maximize continuous waterway access and maintain a  
10 minimum water depth of 6 feet.” (SWRCB-113, page 3-5, lines 3-6)

11 Six feet is not adequate depth for many vessels. My sailboat has a keel depth of 7 ft, as  
12 do most larger sailing vessels, while some have keel depths up to 15 ft. Larger tugboats have a  
13 keel depth of at least 6 ft. It is not clear that the large loaded barges will not have water depths  
14 less than 6 ft. For safe operation, minimum water depths of 8-10 ft must be maintained in  
15 narrow waterways where large tugboats and barges are operating. Tugboats, with their large and  
16 powerful props, operating in 6 ft of water would cause major disturbances of bottom sediments.

## 17 2. **The number of barge trips may be significantly underestimated.**

18 Mr. Bednarski states that 5900 barge trips will be needed to transport tunnel lining segments  
19 from ports to the barge landings for unloading. The size of the tunnel lining segments has not  
20 been discussed, only described as being greater than 700,000 in number and being 2 ft thick.  
21 One can calculate an approximate size of the segments as being 26 ft arch width, and 40 ft long.  
22 Transport of the more than 700,000 segments in 5,900 barge trips would place approximate 120  
23 segments per barge. Mr. Bednarski’s testimony indicates that this is possible, but he provides no  
24 evidence for that fact and it remains unaddressed in the Draft EIR (SWRCB-113). Including  
25 transport of bulk materials, barge trips may increase to 9,400. However, the above estimates are  
26 questionable based on the stated fact that barge size has not been determined. The narrow  
27 waterways will likely require the use of smaller barges. In addition, the CWF documents state  
28 that it might be necessary to move tunnel muck and borrow material in barges. Mr. Bednarski

1 testified on cross-examination that the locations for obtaining borrow fill had not been identified  
2 (R.T. 138:14-139:10.)

3 Mr. Bednarski states that there will be an average of four round trips per day for up to 5.5  
4 years. An average over this long time period does not indicate the peak number of barge trips,  
5 or the potential danger of the barges to navigation. Danger and potential impact must be based  
6 on worst case scenarios, not daily averages. There will be many days when there is no barge  
7 traffic. The frequency of barge trips will vary from month to month, with highest traffic  
8 proposed for the summer months when recreational boat traffic in the Delta is the highest. The  
9 deletion of two barge landings, as described in the Draft Supplemental EIR (SWRCB-113), will  
10 necessitate additional barge traffic at the remaining sites.

11 Mr. Bednarski testimony is further complicated by statements in the supplemental EIR  
12 (SWRCB-113, Table 19-0, p19-1). Table 19-0 lists the number of barge trips as 11,800. On  
13 page 19-37 of SWRCB-113, lines 2-5 it states:

14 ***“NEPA Effects:*** Approximately 11,800 barge trips are projected to carry tunnel segment  
15 liners from ports to the sites listed above via the Sacramento River under the proposed  
16 project, averaging approximately 4 roundtrips per day during construction of the water  
conveyance features for up to 5.5 years.”

17 So, the number of barge trips to transport the tunnel liner segments has been increased from  
18 5,900 to 11,800, but the average number of trips per day stays at 4. A calculator shows that the  
19 number of round trips per day is at least 5.9, and will likely be significantly more in some  
20 months because of restrictions in other months.

21 The large barges, loaded with heavy tunnel segments or bulk materials have poor  
22 maneuverability when being pushed by a tugboat. They cannot give way to passing boats and  
23 dangerous situations including groundings and collisions are likely to occur in the narrow  
24 waterways.

25 The CWF project is in continual flux. Without identifying the final facility configuration  
26 and final locations for borrow pits and tunnel muck disposal sites, it is impossible to determine  
27 just how many barge trips may be required, but it appears to be substantially more than is stated  
28 in the Final EIR/EIS, ITP, Mr. Bednarski’s testimony, or the Supplemental EIR/EIS. There

1 needs to be a final determination of what the project will be, and a full accounting of how and  
2 where all materials will be moved, that is a full assessment of logistics, before Mr. Bednarski's  
3 statement that barge traffic and placement of barge landings in narrow waterways can be  
4 declared as having no significant impact on navigation in the Delta.

5 For this reason, the State Water Resources Control Board cannot determine that the  
6 recreational beneficial use is protected during WaterFix construction until there is a traffic and  
7 barge traffic analysis based on a final project description and actual traffic mitigation plan.

#### 8 **IV. PERMIT TERMS: BIOLOGICAL GOALS AND OBJECTIVES**

9  
10 As Dr. Earle testified, the CWF project has not adopted any biological goals and objectives  
11 to guide the CWF adaptive management process, including stage 1, "Planning." Appropriate  
12 quantifiable biological goals and objectives have been available since 2010. As mandated under  
13 Water Code section 85084.5, the California Department of Fish and Wildlife (then called the  
14 Department of Fish and Game) recommended to the Board the following quantifiable biological  
15 goals protecting avian species:

- 16 1. Maintain the current distribution and existing populations of the California black rail and  
17 reestablish and maintain viable populations throughout its historic range in the Delta and  
18 Suisun Marsh by expanding tidal marsh habitat with suitable high marsh and adjacent  
upland.
- 19 2. Maintain the current distribution and existing populations of the California clapper rail,  
20 and restore tidal marsh habitat in the Suisun Marsh.
- 21 3. Protect, enhance, and increase habitat sufficient to support a viable breeding population  
22 of Swainson's hawk. The interim prescription is to increase the current estimated  
23 population of 1,000 breeding pairs in the Central Valley to 2,000 breeding pairs.
- 24 4. Achieve recovery objectives identified in the Pacific Flyway Management Plan for the  
25 Central Valley population of greater sandhill cranes and Assembly Bill (AB) 1280.
- 26 5. Maintain and enhance and restore suitable riparian corridor migration habitats and restore  
27 suitable breeding habitat within the historic breeding range of California yellow warbler  
28 in the Delta and Central Valley.
6. Achieve recovery objectives identified in the least Bell's vireo recovery plan in the Delta  
through riparian habitat restoration and enhancement.

- 1 7. Protect existing suitable riparian forest habitat areas within the western yellowbilled  
2 cuckoo historic range and increase the areas of suitable riparian forest habitat sufficiently  
3 to allow the natural expansion of the Sacramento Valley population in the Delta.
- 4 8. Protect, enhance, and restore the habitat functions and values of tidal, permanent and  
5 seasonal managed wetlands and agricultural lands within the Delta and Suisun Marsh for  
6 waterfowl, shorebirds, and waterbirds as described in the 2006 Central Valley Joint  
7 Venture Implementation Plan  
8 ([http://www.centralvalleyjointventure.org/materials/CVJV\\_fnl.pdf](http://www.centralvalleyjointventure.org/materials/CVJV_fnl.pdf).)

9 The currently proposed project will have impacts on over 10,000 acres. As explained above,  
10 it has not been designed to meet the above goals and is still in flux. In addition, Section 3856 of  
11 the Board's regulations requires that an application for Water Quality Certification include "[a]  
12 full, technically accurate description, including the purpose and final goal, of the entire activity,"  
13 a condition which clearly cannot be met at this time.

14 The Board should not approve the petition, because neither the project conceptual design nor  
15 the proposed diversions are in the public interest. But if the Board does approve the petition, I  
16 propose the following permit terms:

- 17 1. The Petitioners shall perform all initial biological surveys and report the results to the  
18 State Water Resources Control Board within 2 years. The reports shall also be  
19 submitted prior to the Section 404d Certification.
- 20 2. The Petitioners shall develop a final preliminary engineering design, including tunnel  
21 muck areas and borrow pits, and a final mitigation plan, which conforms with the  
22 above biological goals, and submit it to the Board for the Water Quality Certification,  
23 so that the impacts of construction on fish and wildlife can be assessed.
- 24 3. The Petitioners shall also submit a complete and accurate description of the estimated  
25 barge traffic, construction traffic, and traffic mitigation plans, and submit it to the  
26 Board for the Water Quality Certification, so that the impacts on recreation from  
27 construction can be assessed.
- 28 4. The Petitioners shall perform biological surveys during construction as required in the  
mitigation plans, and submit the results to the State Water Resources Control Board.

